



**World Health  
Organization**

Regional Office for South-East Asia

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## **Working Paper**

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## Statement of the Problem

Health care-associated infections (HAIs) are a major patient safety issue worldwide. They are linked to failures in health care systems and processes as well as to behavioural practices of health care workers, patients, and the public at large. At any given time, more than 1.4 million people around the world become seriously ill from such infections. In industrialized nations, it is estimated that 5-10% of hospitalized patients acquire one or more infections and that 15-40% of those admitted to critical care are affected. Overcrowding of patients and understaffing at health care facilities contribute to the perpetuation of this problem and, in some developing country settings, the proportion of patients affected can exceed 25%. A 2005 review of data on neonatal infections among hospital-born babies in developing countries estimated that HAI rates were 3 to 20 times higher than those reported in industrialized countries.

The burden of HAI in the South East Asia region is less well documented. The Hospital Infection Society of India estimates that the incidence of HAI in India ranges from 5-30%. A study conducted in two teaching hospitals in Indonesia in 2002 reported that 1 in 14 hospitalized patients had acquired one or more HAI and 5-8% of patients who underwent surgery acquired such infections. A point prevalence study carried out in 42 hospitals across Thailand in 2001 found an overall prevalence of 6.4% with the highest proportion in surgical followed by medical, pediatric and orthopedic departments.

HAI contribute significantly to patient morbidity and mortality, particularly in intensive care units. Such infections delay recovery from illness, promote the development of resistance to antibiotics, and create additional demands on limited health care resources. It has been estimated that HAI account for a loss of more than US\$40 million every year in Thailand alone.

The tools and interventions to tackle these infections already exist but they are not widely implemented. While measures as simple and inexpensive as hand washing, with soap and water, can be implemented immediately to reduce HAI and save millions of lives, compliance with hand hygiene is still very low throughout the world. The barriers to implementation include heavy workloads, insufficient numbers of full-time infection control nurses, inadequate training in epidemiologic surveillance and outbreak investigation, shortages of supplies, and a lack of support from hospital administrators.

The advent of life-threatening infections such as severe acute respiratory syndrome (SARS), the risk of new influenza pandemics such as Avian Influenza (AI), the rise of methicillin resistant *S. aureus* (MRSA)—currently 70-80% of isolates of *S. aureus* in many Asian countries—and the emergence of extensively drug-resistant TB (XDR-TB), highlight the urgent need for efficient infection control practices in health care.

## Response to Date

### WHO

HAI are not a new problem in the South-East Asia Region. WHO has been working closely with Member States in the Region to prevent HAI in the areas of blood safety, injection safety, maternal and neonatal health, prevention of airborne infections, and health care waste management. In January 2002, WHO Regional Office for South-East Asia (WHO/SEARO) published Guidelines on the Prevention and Control of Hospital Associated

Infections which were finalized during an informal consultative meeting with experts in Bangkok, Thailand, from 26 to 29 June 2001. This was followed by a regional workshop to promote implementation of the Guidelines in Pune, India, from 24 to 26 September 2002. With the advent of the SARS epidemic and in order to build a national core of trainers who could subsequently train others in proper infection control practices, WHO/SEARO held a 'hands-on' regional workshop on Good Infection Control Practices (with emphasis on the prevention and control of SARS) at the Tata Memorial Hospital in Mumbai, India, from 24 to 27 June 2003. In 2004, WHO SEAR and Western Pacific Region (WPR) jointly published Practical Guidelines for Infection Control in Health Care Facilities which include a special section on infection control for selected situations such as SARS and infections with multi-drug resistant organisms.

Prevention of HAI was discussed in-depth at the WHO Regional Workshop on Patient Safety which was held in New Delhi, India, from 12 to 14 July 2006. Participants identified HAI as a priority area of work in Patient Safety and recommended that WHO: a) establish a network for sharing information and best practices on prevention of HAI; b) make available applicable standards, protocols and guidelines; c) organize training programmes with an emphasis on practical application and implementation; d) provide technical assistance to countries when required, and e) establish an information system for surveillance in infection control.

In October 2005, in order to catalyse political commitment and global action to prevent HAI, the WHO World Alliance for Patient Safety launched its first Global Patient Safety Challenge with the theme "Clean Care is Safer Care". The Challenge has invited ministers of health from all WHO Member States to make a formal statement pledging to tackle HAI within their country. This is designed to catalyse leadership from health ministers, professional bodies, industry, and health care workers. Under the Challenge, WHO is promoting well-established WHO strategies in areas which have a direct bearing on health care-associated infection and patient safety such as of blood safety, injection and immunization safety, safe clinical practices, and safe water, basic sanitation and waste management. A key action promoted by the Challenge, which cuts across all areas, is optimal hand hygiene. As a supplement to existing WHO guidelines, the World Alliance for Patient Safety has developed (Advanced) Guidelines on Hand Hygiene in Health Care in consultation with more than 100 experts from around the world including South-East Asia. These WHO hand hygiene guidelines are being pilot tested at several health care facilities across the world including in our Region.

### *Member States*

Most countries in the Region have instituted hospital infection control committees, however many of them are not fully functional. Many hospitals in the Region have appointed Infection Control Officers or Nurses, but few have provided sufficient training or support to allow these staff to carry out their functions effectively, even in major hospitals. Many countries have attempted to undertake surveillance of HAI but standard guidelines are not being widely implemented. As a result, good infection control practices remain inadequate in the Region, even in major hospitals. These patient safety gaps exist not only between countries but also within countries where some hospitals have succeeded in controlling the problem and reducing the risks to patients, while others have not.

Several countries in the Region have accepted the invitation of the Global Patient Safety Challenge and have signed formal pledges to support actions to reduce HAI within their countries and to share results and learning internationally. India, Bangladesh and Bhutan signed national pledges in July, September and November 2006 respectively while Thailand and Indonesia have committed to do so in June and July 2007 respectively.

On the occasion of the national launch of the Global Patient Safety Challenge, the Ministry of Health and Family Welfare in India released a Country Report summarizing the activities undertaken in the areas of safe clinical practices and hand hygiene, blood safety, injection safety, and safe health care waste management. Similarly, the Ministry for Health and Family Welfare of Bangladesh held a technical session which brought together 200 medical and nursing staff, academicians, representatives of professional associations and district health managers from across the country, to discuss national activities in the areas blood safety, drug safety, waste management, injection safety and hospital infection control.

Several studies have been conducted in the Region to evaluate the effectiveness of interventions to improve hand hygiene. A study performed at two Thai university hospitals in 2004, one in Bangkok and the other in Chiangmai, found improved adherence to hand hygiene after the implementation of multi-faceted interventions that included posters, leaflets, contests, slogans, provision of alcohol-based hand rubs, and performance feedback. A study conducted by the Hospital Infection Society of India at the Lady Harding Medical College and Hospital in Delhi in 2006 showed a significant improvement in compliance with hand hygiene after the introduction of a locally manufactured alcohol-based hand rub based on the WHO formulation. Similarly Bangladesh is in the planning phase of a study to pilot the WHO Guidelines on Hand Hygiene at the Medical College Hospital in Chittagong using a locally manufactured alcohol-based hand rub based on the WHO formulation.

## **The way forward**

Widespread implementation of effective HAI control will require implementing system changes, overcoming resource constraints, and instituting human and organisational changes. Compliance with even simple and inexpensive measures such as hand hygiene requires the involvement and commitment of all stakeholders, including hospital administrators, health care personnel, patients and their families. The WHO Regional Patient Safety Workshop on “Clean is Safer Care” will bring together policy makers, programme managers, hospital administrators and health care personnel, to build regional commitment and capacity to address this problem. The specific objectives are:

1. To review the status of HAI in the Region;
2. To orient participants on the availability of strategies and tools to reduce HAI, and
3. To outline a set of action points that countries can adopt as part of an integrated strategy to reduce HAI at the facility level with a focus on hand hygiene.